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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/677,821

10/03/2000

Tetsuji Kishi

43889-984

5220

7590

07/27/2004

McDermott Will & Emery
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Washington, DC 20005-3096

EXAMINER

TRAN, TAM D

ART UNIT

PAPER NUMBER

2676

17

DATE MAILED: 07/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/677,821

Applicant(s)

KISHI, TETSUJI

Examiner

Tam D Tran

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-13 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-10, 13, and 16-18 is/are allowed.
- 6) ☒ Claim(s) 11, 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 11 is rejected under 35 U.S.C. 102(e) as being anticipated by Balram et al.

(USPN 5969699), hereinafter simply Balram.

2. In regard to claim 11, Balram teaches an apparatus for drawing a line connecting a start point to an end point, the start and end points both being presented on display means and being represented by mutually different sets of coordinates, the apparatus comprising:

Data storage means with data storage areas (the data storage areas broadly reads on three storage locations, FIFO 132, FIFO 133, frame buffer 187) on which multiple coordinate data are storable, the coordinate data including first and second coordinate data (X, Y coordinates) of the line connecting the start and end points together; see Fig.9B, col.9 lines 9-15.

A start position evaluator 64 (Fig.9B) comprising:

Adding means (adder) for adding together the first and second coordinate data and outputting added data; see equation in col.9, lines 40-47; and

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Divide-by-two means (shifter, see equation in col.9, lines 40-47 where $K=2$) for dividing the added data by two and outputting divided data, wherein the divided data is stored as third coordinate data on a predetermined one of the data storage areas (the output of start position evaluator 64 is transfer to the predetermined one of the three data storage areas which is the frame buffer 187). See Fig.9B

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 12 is rejected under 35 U. S.C. 103(a) as being unpatentable over Balram et al. in view of Dao (USPN 5594848)

In regard to claim 12, Balram does not teach the adding and divide-by-two means repeatedly perform the addition and the divide-by-two operation for multiple line segments. However, Dao teaches the adder and divide-by-two means (shift 70, fig.7) repeatedly perform the addition and the divide-by-two operation for multiple line segments (fig.7. col.6, lines 54-63). Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention to substitute the adder and divide-by-two means (shifter 70, fig.7) repeatedly perform the addition and the divide-by-two operation for multiple line segments taught by Dao for Balram's adder and shifter

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because this would provide a high speed circuit for drawing lines within a boundary of rectangle which can be implemented in hardware or software (col.2, lines 6-9 of Dao).

Allowable Subject Matter

4. Claims 5-10, 13, 16-18, are allowed.

5. The following is a statement of reasons for the indication of allowable subject matter: The prior art taken singly or in combination does not teach or suggest an apparatus for drawing a line connecting a start point to an end point, the apparatus comprising:

First and second data storage means, each said storage means accepting a plurality of input coordinate data and sequentially outputting one item of these data after another on a first in first out basis;

Adding means for receiving and adding together the respective coordinate data output from the first and second data storage means and output added data; and

Divide-by-two means for dividing the added data by two and outputting divided data, wherein the coordinate data output from the first and second data storage means are output to the first data storage means, and wherein the divided data is input from the divide-by-two means to the second storage means.

The closest prior art shows an apparatus for drawing a line method but does not disclose Divide-by-two means for dividing the added data by two and outputting divided data, wherein the coordinate data output from the first and second data storage means are output to the first data storage means, and wherein the divided data is input from the divide-by-two means to the second storage means.

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The prior art taken singly or in combination does not teach or suggest an apparatus for drawing a line connecting a start point to an end point, the apparatus comprising:

First and second data storage means, each said storage means accepting a plurality of input coordinate data and sequentially outputting one item of these data after another on a first in first out basis;

Midpoint generating means for generating a midpoint coordinate data from the respective coordinate data output from the first and second data storage means and outputting the midpoint coordinate data, wherein the coordinate data output from the first and second data storage means are input to the first data storage means, and wherein the midpoint coordinate data is input from the generating means to the second storage means.

The closest prior art shows an apparatus for drawing a line using midpoint method but does not disclose the coordinate data output from the first and second data storage means are input to the first data storage means, and wherein the midpoint coordinate data is input from the generating means to the second storage means.

Response to Arguments

6. Applicant should submit an argument under the heading "Remarks" pointing out disagreements with the examiner's contentions. Applicant must also discuss the references applied against the claims, explaining how the claims avoid the references or distinguish from them.

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7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tam D. Tran** whose telephone number is

703-305-4196. The examiner can normally be reached on MON-FRI from 8:30 – 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Matthew Bella** can be reached on **703-308-6829**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

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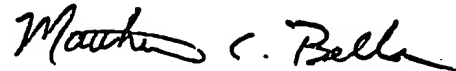
Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Tam Tran

TT
Examiner

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MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600